

Ex 0 Reminder from elementary school.
Divide 1542 by 12

$$\begin{array}{r}
 \text{Quotient} \rightarrow \quad 128R6 \rightarrow \text{Remainder} \\
 \text{Divisor} \rightarrow 12 \overline{) 1542} \leftarrow \text{Dividend} \\
 \quad + \underline{-12} \\
 \quad \quad 34 \\
 \quad \quad + \underline{-24} \\
 \quad \quad \quad 102 \\
 \quad \quad \quad + \underline{-96} \\
 \quad \quad \quad \quad 6
 \end{array}$$

$$\begin{array}{r}
 \text{Ex 1} \quad x-2 \overline{) x^3 - 5x^2 + 4x - 2} \\
 \quad + \underline{-(x^3 + 2x^2)} \\
 \quad \quad -3x^2 + 4x \\
 \quad \quad + \underline{+(3x^2 + 6x)} \\
 \quad \quad \quad -2x - 2 \\
 \quad \quad \quad + \underline{+(2x + 4)} \\
 \quad \quad \quad \quad -6
 \end{array}$$

$x^2 - 3x - 2 + \frac{-6}{x-2}$

Ex 1¹/₂ $(125y^3 - 8) \div (5y - 2)$

$$\begin{array}{r} 25y^2 + 10y + 4 \\ 5y - 2 \overline{) 125y^3 + 0y^2 + 0y - 8} \\ \underline{+(125y^3 + 50y^2)} \\ 50y^2 + 0y \\ \underline{+(50y^2 + 20y)} \\ 20y - 8 \\ \underline{+(20y + 8)} \\ 0 \end{array}$$

